

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC-BN-W.No.06-2016-17

Date: 06.06.2016

TEST REPORT

CLIENT	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	:	Sri.B.Narayanaswamy, Contractor, Bangalore.
NAME OF THE WORK	:	Construction of Culverts Thanisandra surrounding area in Ward No.06 Byatarayanapura Sub Division, BBMP, Bangalore
REFERENCE	:	EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part -5)	160 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	380 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	30.00 %	

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For Civil Expert

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Job No.: CECTC-BN-W.No.06-2016-17

Date : 06.06.2016

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : Sri.B.Narayanaswamy, Contractor, Bangalore.

Name of Work : Construction of Culverts Thanisandra surrounding area in Ward No.06 Byatarayanapura Sub Division, BBMP, Bangalore

Reference : EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016

Date of Testing : 06.06.2016

Material : Sand Total wt. of aggregates in gms = 1000

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	83	8.30	8.30	91.7	90-100
2.36	89	8.90	17.20	82.8	75-100
1.18	125	12.50	29.70	70.3	55-90
600 Micron	223	22.30	52.00	48.0	35-59
300 Micron	321	32.10	84.10	15.9	8-30
150 Micron	154	15.40	99.50	0.5	0-10

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Job No.: CECTC-BN-W.No.06-2016-17

Date : 06.06.2016

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : Sri.B.Narayanaswamy, Contractor, Bangalore.

Name of Work : Construction of Culverts Thanisandra surrounding area in Ward No.06 Byatarayanapura Sub Division, BBMP, Bangalore

Reference : EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016

Date of Testing : 06.06.2016

Material : 40mm Aggregates

Total wt. of aggregates in gms = **15000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	412	2.75	2.75	97.25	95-100
20	8263	55.09	57.83	42.17	30-70
10	3541	23.61	81.44	18.56	10-35
4.75	2541	16.94	98.38	1.62	0-5

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URL : www.civilexperts.in

Date : 06.06.2016

Client	: Assistant Executive Engineer , Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: Sri.B.Narayanaswamy , Contractor, Bangalore.
Name of Work	: Construction of Culverts Thanisandra surrounding area in Ward No.06 Byatarayanapura Sub Division, BBMP, Bangalore
Reference	: EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016
Date of Testing	: 06.06.2016
Material	: 20mm Aggregates

Total wt. of aggregates in gms = 5000

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	196	3.9	3.9	96.1	95-100
10	2451	49.0	52.9	47.1	25-55
4.75	2323	46.5	99.4	0.6	0-10

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Building Material Testing | Bridge Load Testing | Structural Strengthening Solutions | Quality Control / Assurance / Audit
Proof Checking (Structural Designs & Drawings) | Soil Stabilization and Shoring Services | Non - Destructive Testing

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Job No.: CECTC-BN-W.No.06-2016-17

Date: 08.06.2016

**TEST RESULTS OF PHYSICAL PROPERTIES OF REINFORCEMENT
STEEL**

Client : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : Sri.B.Narayanaswamy, Contractor, Bangalore.

Name of Work : Construction of Culverts Thanisandra surrounding area in Ward No.06 Byatarayanapura Sub Division, BBMP, Bangalore

Reference : EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016

Sample Identification : 10mm, 12mm, 16mm, TMT Fe 500 Bars

Technical Reference : IS 1786:2008, IS 1608:2005, IS 1599:1985 (Reaffirmed 2006)

Date of test : 08.06.2016

S.No	Brand	Nominal size (dia in mm)	Mass per metre (kg/metre)	TENSILE STRENGTH		
				0.20 % proof stress/ yield stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation, percent on gauge length
1	Fe 500	10	0.617	545	569	16.0
2	Fe 500	12	0.887	563	582	18.0
3	Fe 500	16	1.57	590	610	19.0

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Job No.: CECTC-BN-W.No.06-2016-17

Date: 08.07.2016

TEST REPORT ON CONCRETE CUBES

Client : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP,
Agency : Sri.B.Narayanaswamy, Contractor, Bangalore.
Name of the work : Construction of Culverts Thanisandra surrounding area in Ward No.06
Byatarayanapura Sub Division, BBMP, Bangalore
Reference : EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016
Sample ID : Cement Concrete
Size of cubes : 150mmx150mmx150mm
Cross Sectional Area : 22500 mm²
Technical Reference : IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete : M₂₀
Compressive Strength as on : 28th day

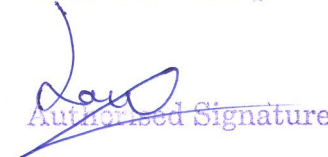
Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	10.06.2016	08.07.2016	8.169	489.3	21.75
2	10.06.2016	08.07.2016	8.174	502.7	22.34
3	10.06.2016	08.07.2016	8.201	516.3	22.95

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Job No.: CECTC-BN-W.No.06-2016-17

Date: 08.07.2016

TEST REPORT ON CONCRETE CUBES

Client : **Assistant Executive Engineer**, Byatarayanapura Sub Division, BBMP,
Agency : **Sri.B.Narayanaswamy**, Contractor, Bangalore.
Name of the work : Construction of Culverts Thanisandra surrounding area in Ward No.06
Byatarayanapura Sub Division, BBMP, Bangalore
Reference : EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016
Sample ID : Cement Concrete
Size of cubes : 150mmx150mmx150mm
Cross Sectional Area : 22500 mm²
Technical Reference : IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete : M₂₀
Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	10.06.2016	08.07.2016	8.155	495.3	22.01
2	10.06.2016	08.07.2016	8.194	512.4	22.77
3	10.06.2016	08.07.2016	8.216	523.6	23.27

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Job No.: CECTC-BN-W.No.06-2016-17

Date: 08.07.2016

TEST REPORT ON CONCRETE CUBES

Client : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP,
Agency : Sri.B.Narayanaswamy, Contractor, Bangalore.
Name of the work : Construction of Culverts Thanisandra surrounding area in Ward No.06
Byatarayanapura Sub Division, BBMP, Bangalore
Reference : EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016
Sample ID : Cement Concrete
Size of cubes : 150mmx150mmx150mm
Cross Sectional Area : 22500 mm²
Technical Reference : IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete : M₂₀
Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	10.06.2016	08.07.2016	8.163	501.2	22.28
2	10.06.2016	08.07.2016	8.184	520.7	23.14
3	10.06.2016	08.07.2016	8.210	486.3	21.61

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K. S. Narayanaswamy
Sri. B. Narayanaswamy, Contractor

For Civil Expert
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Job No.: CECTC-BN-W.No.06-2016-17

Date: 15.06.2016

PRECAST SLAB (CORE) TEST REPORT

Client : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Contractor : Sri.B.Narayanaswamy, Contractor, Bangalore.

Name of Work : Construction of Culverts Thanisandra surrounding area in Ward No.06 Byatarayanapura Sub Division, BBMP, Bangalore

Reference : EE/BTP/BBMP/E-PMT/05/2016-17 Dated:26.04.2016

No. of Sample Tested : 03

Date of Testing : 15.06.2016

Technical Reference : IS:516-1959 (Reaffirmed 1999), SP-24:1983.

Grade of Concrete : M₂₀

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m ³)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm ²)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm ²)	Equivalent Cube Compressive Strength (N/mm ²)
1	50.00	75.00	0.340	2308.81	1.50	0.960	33.85	17.24	18.62	17.87	22.34
2	50.00	70.00	0.315	2291.83	1.40	0.960	35.20	17.93	19.36	18.59	23.23
3	50.00	80.00	0.390	2482.82	1.60	0.960	32.90	16.76	18.10	17.37	21.72

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For Civil Expert

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